

REMARKS

Applicants hereby add new product claims 20-23 to the application, which has original product claims 1-19 pending examination. No new matter has been added.

New independent claim 20 is drawn to a surfactant-templated mesoporous dielectric film on a substrate prepared from a silica precursor by evaporation and characterized by disordered porosity, a combination not found in the prior art but amply supported by applicants' disclosure. Specifically, support is found in Example 1 at page 13, line 18 through page 16, line 32. The surfactant-containing silica precursor was formed into a film by evaporation during spin coating, as described in the first four paragraphs of Example 1. The disordered pore structure is described in the Summary of the Invention at page 6, lines 26 through 30; in Figs. 4A, 4B and 5 and at page 16, lines 7 through 15.

New dependent claims 21-23 further limit claim 20 and are thus allowable and also amply supported.

Specifically, claim 21 is further limited to inclusion in the silica precursor of one or more of methyl and ethyl groups, supported by applicants' disclosure at page 10, lines 16 through 18.

New claim 22 is further limited to inclusion in the precursor of one or more of alkyl and phenyl groups, supported by applicants' disclosure at page 10, lines 16 through 18 (methyl and ethyl being examples of the alkyl group; phenyl triethoxy silane being expressly included) and in Example 5 described at page 23, lines 8 through 12 (mono- and di-alkyl substituted alkoxysilanes, e.g. alkyl-ethoxysilane, being expressly included).

Finally, new claim 23 is further limited to inclusion in the precursor of carbon-containing groups, supported by applicants' disclosure of the use of a tetraethyl orthosilicate (TEOS)-containing silica precursor at page 10, lines 16-18 and page 11, lines 23-27. (Since TEOS contains ethyl (C_2H_5), and since ethyl contains hydrogen (H) and carbon (C), the precursor necessarily includes carbon-containing groups.) Additional support for carbon-containing groups in the silica precursor is shown in the range of silica precursors with carbon-containing groups, listed at page 10, lines 16-18.

Applicants submit that these new claim are allowable, along with the original claims 1-19, and urgently solicit favorable consideration and issuance of a Notice of Allowance.

The Examiner is requested to call the undersigned if any questions arise concerning the above-mentioned application.

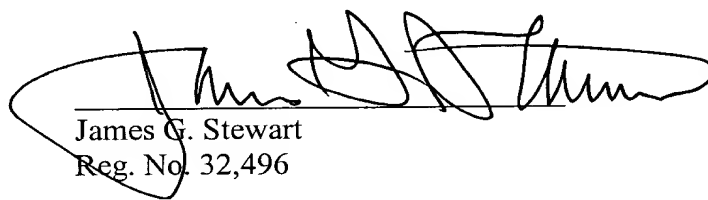
Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.



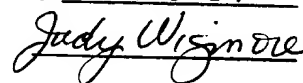
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

21. (New) A surfactant-templated mesoporous dielectric film on a substrate prepared from a silica precursor solution by evaporation, wherein the film is characterized by disordered porosity.
22. The dielectric film of claim 20, wherein the silica precursor includes one or more of methyl and ethyl groups.
22. (New) The dielectric film of claim 20, wherein the silica precursor includes one or more of alkyl and phenyl groups.
23. (New) The dielectric film of claim 20, wherein the silica precursor includes carbon-containing groups.